Full Performance Amplifiers

Available in 4 Pin TO-8 (TM), 4 Pin TO-8B (TR), Flatpacks, Surface Mount Packages and Connectorized Housings

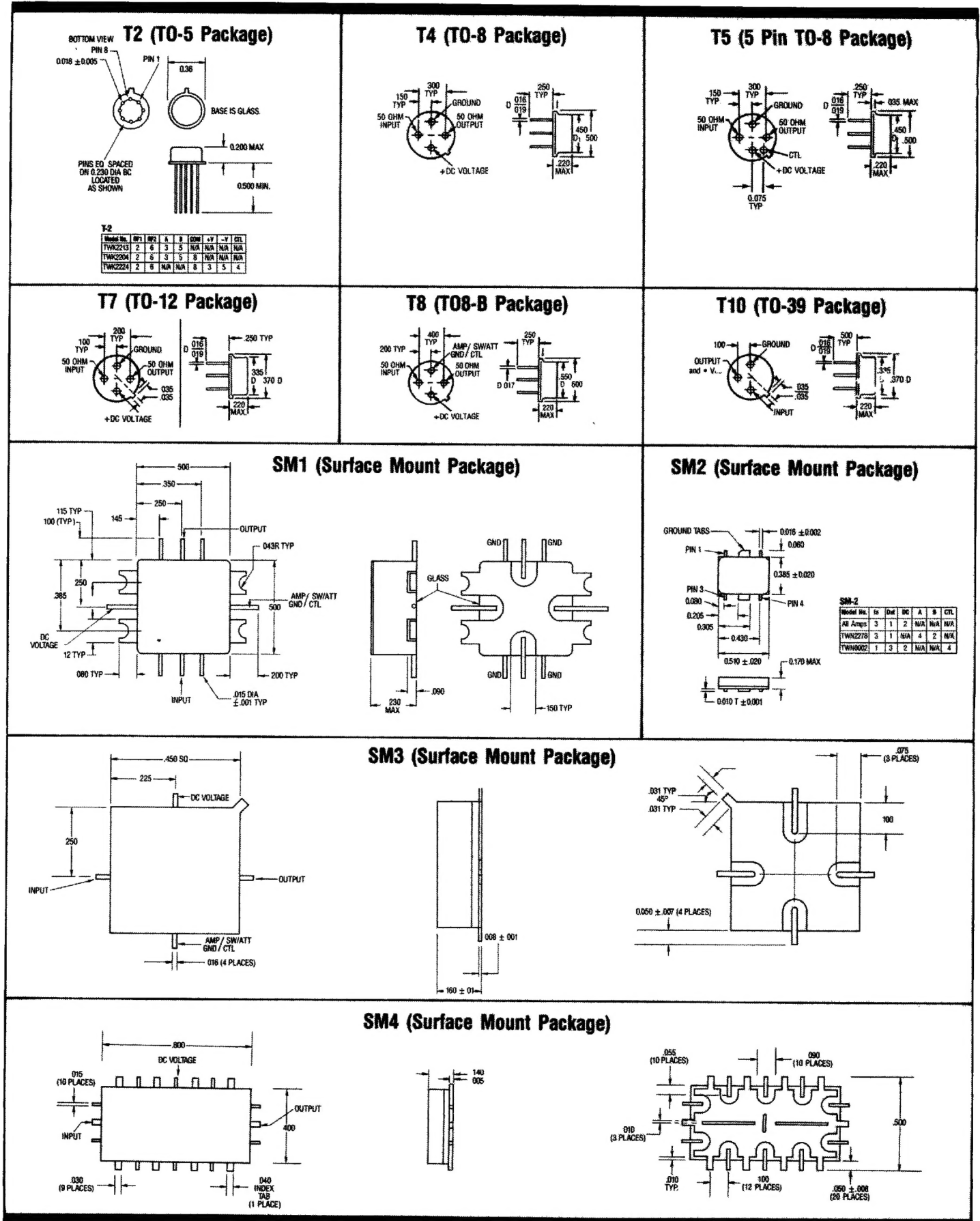(Listed by increasing Frequency, Noise Figure, and Power)

B-74-09-51

Model No.	Freq. Range (MHz)	Gain (dB) Typ	Gain (dB) Min	Noise Figure (dB) Typ	Noise Figure (dB) Max	Power Output (dBm) Typ	Power Output (dBm) Min	Third Order Intercept Point Typ (dBm)	VSWR MAX In/Out	Power Typ Vdc	Power Typ mA
TR6476	10-450	29.0	28.0	2.7	3.5	+16.0	+11.0	+29	2.0:1	+8	65
TM6588	5-450	18.5	17.5	4.5	6.0	+21.0	+19.0	+35	2.0:1	+15	80
*TM6719	5-500	33.0	31.0	1.7	2.0	+9.5	+8.0	+19	2.0:1	+15	35
TM6143	5-500	15.8	15.0	1.6	2.5	+7.5	+5.0	+20	2.0:1	+15	14.5
TR7216	20-500	24.5	24.0	2.2	2.5	+19.5	+18.0	+33.5	2.0:1	+12	60
*TM6210	5-500	15.3	14.0	1.8	3.0	+7.5	+4.5	+18	2.0:1	+5	12
*TM5519	5-500	15.0	14.0	2.25	3.0	+14.5	+11.5	+29	2.0:1	+5	35
TM5119	5-500	15.5	14.0	2.3	3.0	+16.0	+14.0	+32	2.0:1	+15	30
TM6674	5-500	28.5	26.0	2.2	3.5	-1.0	-3.0	+9	2.0:1	+15	13.5
TM6573	5-500	32.0	29.0	2.5	3.5	+2.0	-2.5	+14	2.0:1	+15	20
TM6501	5-500	16.5	15.5	2.5	3.5	+3.0	+1.0	+15	2.0:1	+15	10
TM6675	10-500	20.5	19.0	2.7	3.5	+4.5	+2.0	+15	2.0:1	+15	15
TM6512	5-500	21.0	19.0	2.5	3.5	+10.0	+8.0	+21	2.0:1	+15	23
TM6575	5-500	21.0	19.0	2.4	3.5	+9.5	+8.5	+21	2.0:1	+15	23
TM6517	5-500	22.7	21.0	2.4	3.5	+9.5	+8.5	+21	2.0:1	+15	22
*TM5544	10-500	12.5	11.0	2.5	3.5	+14.0	+12.0	+28	2.0:1	+5	35
TM6544	10-500	12.0	10.5	2.0	3.5	+15.0	+13.0	+32	2.0:1	+15	35
TM6583	10-500	30.0	28.0	2.3	4.0	0.0	-4.0	+11	2.0:1	+5	13
*TM5101	5-500	13.0	12.0	2.75	4.0	+7.5	+6.0	+21	2.0:1	+15	20
TM6681	10-500	17.5	15.5	3.0	4.0	+9.5	+7.0	+23	2.0:1	+15	32
TM6524	5-500	30.5	28.5	3.0	4.0	+15.0	+14.0	+23	2.0:1	+15	65
TR6689	5-500	30.0	28.0	3.2	4.0	+21.5	+20.0	+34	2.0:1	+15	130
TR6676	10-500	40.5	37.5	3.0	4.3	+15.2	+13.1	+26	2.0:1	+15	77
TM6581	20-500	22.0	21.0	3.2	4.5	+16.0	+13.5	+28	2.0:1	+15	27
TM6674	5-500	28.5	26.0	2.2	3.5	-1.0	-3.0	+9	2.0:1	+15	13.5
*TM5133	10-500	10.0	9.0	3.3	4.5	+16.0	+14.5	+30	2.0:1	+15	57
*TM6582	30-500	23.0	21.0	3.5	4.5	+21.0	+17.0	+33	2.0:1	+15	47
TM6505	5-500	15.0	14.0	4.0	5.0	+10.0	+8.5	+23	2.0:1	+15	24
TM6533	5-500	16.5	15.0	3.5	5.0	+17.5	+16.5	+33	2.0:1	+15	50
TM6577	5-500	16.5	15.0	3.5	5.0	+17.5	+16.5	+33	2.0:1	+15	50
TR6589	5-500	26.5	25.0	3.8	5.0	+22.0	+20.0	+35	2.0:1	+15	130
TM6555	5-500	14.7	14.0	4.0	5.5	+11.5	+10.0	+25	2.0:1	+15	30
TM6572	5-500	14.7	13.5	4.0	5.5	+13.0	+11.0	+27	2.0:1	+5	30
TM6672	5-500	14.7	13.5	4.0	5.5	+13.0	+11.0	+27	2.0:1	+9	30
TM6147	5-500	17.0	16.0	3.5	5.5	+19.5	+17.5	+25	2.0:1	+15	50
TM6545	10-500	11.5	10.0	4.0	5.5	+19.0	+18.0	+36	2.0:1	+15	60
TM6574	5-500	30.0	27.0	4.8	6.0	+9.0	+7.0	+22	2.0:1	+15	37
TM6607	5-500	15.2	14.0	4.8	6.0	+15.0	+13.0	+27	2.0:1	+15	50
TR6776	1-520	30.0	26.0	4.1	6.0	+16.0	+13.5	+28	2.0:1	+15	65
TM6523	5-500	25.5	24.0	4.0	6.0	+16.0	+14.0	+30	2.0:1	+15	75
TM6576	5-500	28.0	26.0	5.0	6.0	+16.0	+14.0	+30	2.0:1	+15	64
*TM6509	5-500	14.5	13.0	4.6	6.0	+23.0	+20.0	+36	2.0:1	+15	88
TM6518	5-500	13.7	12.0	4.5	6.0	+25.0	+22.0	+35	2.0:1	+15	130
TM6557	10-500	15.0	13.5	4.5	6.5	+15.5	+14.0	+30	2.0:1	+15	44
TM6558	5-500	12.0	10.5	4.8	6.5	+19.0	+17.5	+36	2.0:1	+15	65
TM6131	5-500	10.3	9.0	4.5	6.5	+20.0	+18.0	+37	2.0:1	+15	62
TM6503	5-500	9.5	7.0	5.5	7.0	+15.0	+13.0	+33	2.0:1	+24	50
*TM6603	5-500	10.0	8.5	5.5	7.0	+15.5	+14.0	+30	2.0:1	+24	50
TM6559	5-500	11.5	10.0	5.5	7.0	+22.0	+20.0	+36	2.0:1	+15	88
TM6203	5-500	14.5	13.0	5.5	7.5	+25.0	+22.5	+36	2.0:1	+15	127
TM6507	10-500	15.5	14.0	6.0	8.0	+22.0	+20.0	+36	2.0:1	+15	110
*TM6605	10-600	15.7	13.5	3.0	4.5	+11.0	+7.0	+21	2.0:1	+15	24
TM9167	10-800	12.5	11.0	4.2	5.5	+15.5	+14.0	+29	2.0:1	+15	32
TM9118	10-800	14.7	13.5	4.4	5.5	+15.0	+14.5	+29	2.0:1	+15	45

*New Product

3

·T-90-20

Outline Drawings   *All unmarked Pins are internally grounded.*

T2 (TO-5 Package)

BOTTOM VIEW
PIN 8   PIN 1
0.018 ±0.005
0.36
BASE IS GLASS.
0.200 MAX
PINS EQ. SPACED
ON 0.230 DIA BC
LOCATED
AS SHOWN
0.500 MIN.

T-2

Model No.	RF1	RF2	A	B	COM	+V	-V	CTL
TWK2213	2	6	3	5	N/A	N/A	N/A	N/A
TWK2204	2	6	3	5	8	N/A	N/A	N/A
TWK2224	2	6	N/A	N/A	8	3	5	4

T4 (TO-8 Package)

150 TYP   300 TYP
GROUND
50 OHM INPUT   50 OHM OUTPUT
+DC VOLTAGE
250 TYP
.016 .019
450 D .500
.220 MAX

T5 (5 Pin TO-8 Package)

150 TYP   300 TYP
GROUND
50 OHM INPUT   50 OHM OUTPUT
CTL
+DC VOLTAGE
0.075 TYP
.250 TYP   .035 MAX
D .016 .019
450 .500
.220 MAX

T7 (TO-12 Package)

100 TYP   200 TYP
GROUND
50 OHM INPUT   50 OHM OUTPUT
.035 .035
+DC VOLTAGE
.250 TYP
D .015 .019
335 D 370 D
.220 MAX

T8 (TO8-B Package)

200 TYP   400 TYP
AMP/ SW/ATT GND/ CTL
50 OHM INPUT   50 OHM OUTPUT
+DC VOLTAGE
.250 TYP
D .017
550 D 600
.220 MAX

T10 (TO-39 Package)

100   GROUND
OUTPUT and + V
.035 .035
INPUT
.500 TYP
.016 .019
335 .370 D
.220 MAX

SM1 (Surface Mount Package)

500
350
250
115 TYP
100 (TYP)
145
OUTPUT
043R TYP
250
385
500
AMP/ SW/ATT GND/ CTL
DC VOLTAGE
12 TYP
080 TYP
200 TYP
INPUT
.015 DIA ±.001 TYP

GND   GND
GLASS
GND   GND
230 MAX
.090
150 TYP

SM2 (Surface Mount Package)

GROUND TABS
PIN 1
PIN 3
PIN 4
0.016 ±0.002
0.060
0.385 ±0.020
0.080
0.205
0.305
0.430
0.510 ±.020
0.170 MAX
0.010 T ±0.001

SM-2

Model No.	In	Out	DC	A	B	CTL
All Amps	3	1	2	N/A	N/A	N/A
TWN2278	3	1	N/A	4	2	N/A
TWN0002	1	3	2	N/A	N/A	4

SM3 (Surface Mount Package)

.450 SQ
225
DC VOLTAGE
250
INPUT   OUTPUT
AMP/ SW/ATT GND/ CTL
016 (4 PLACES)
008 ± 001
160 ± 01

.075 (3 PLACES)
.031 TYP 45°
.031 TYP
100
0.050 ±.007 (4 PLACES)

SM4 (Surface Mount Package)

800
DC VOLTAGE
015 (10 PLACES)
OUTPUT
INPUT
400
030 (9 PLACES)
040 INDEX TAB (1 PLACE)
140 005

.055 (10 PLACES)   .090 (10 PLACES)
010 (3 PLACES)
.010 TYP.
100 (12 PLACES)
500
.050 ±.008 (20 PLACES)

Outline Drawings *All unmarked Pins are internally grounded.*

DP1 (Dip)

DP3 (Dip)

DP5 (Dip)

DP-5 Switches

Model No.	COM	RF1	RF2	RF3	R4	RF5	R6	RF7	RF8	CTL 1	CTL 2	CTL 3	CTL 4	+Bias	-Bias
TAD5003	7	1	24	13	12	N/A	N/A	N/A	N/A	21	20	17	16	18	N/A
TAD5004	7	1	24	13	12	N/A	N/A	N/A	N/A	20	19	18	17	21	16
TAD5005	19	1	3	10	12	13	15	22	24	5	6	7	N/A	8	17

DP-5 Digital Attenuators

Model No.	RF In/Out	RF In/Out	0.5	1.0	2.0	2.0	4.0	4.4	8.0	12	16	24	32	+Bias	-Bias
TAD2106	24	13	N/A	4	6	7	N/A	8	N/A	9	N/A	5	N/A	N/A	3
TAD5006	24	13	N/A	4	5	N/A	8	N/A	10	N/A	3	N/A	N/A	1	N/A
TAD5007	24	13	N/A	4	N/A	8	N/A	8	N/A	10	N/A	3	N/A	1	N/A
TAD5008	24	13	N/A	N/A	6	N/A	7	N/A	8	N/A	9	N/A	5	1	N/A

DP-3

Model No.	COM	RF1	RF2	+V	CTL
ALL	4	14	8	7	5
TWO5001 ONLY	4	14	8	3	5

RF 2 not used on SPST Switches
+ = +5 Vdc/+15V

DP8 (Dip)

DP-8

Model No.	RF In/Out	RF In/Out	1	2	.4	.8	1.0	1.6	2.0	3.2	4.0	8.4	8.0	16	32	+Bias
TAD5009	28	20	13	9	11	N/A	15	N/A	7	N/A	9	N/A	11	N/A	17	5	1
TAD5010	38	20	N/A	N/A	N/A	7	N/A	9	N/A	11	N/A	13	N/A	15	17	5	1

DP10 (Dip)

DP-10

Model No.	COM	RF1	RF2	RF3	V+	CTC 1	CTC 2	CTC 3	CTC 4
	5	1	8	9	16	15	13	12	11	10

RF 4 not connected on SPST Switches
+ = +5 Vdc

DP11 (Dip)

DP-11 Switch

Model No.	RF COM	RF1	RF2	+Bias	-Bias	CTL
TWO5002	11	1	7	5	3	4

DP-11 Digital Attenuator

Model No.	RF In	RF Out	2.0	4.0	8.0	10.0	+Bias	-Bias
TAD5005	1	14	3	11	12	4	10	5

SG5 (Gull Wing Surface Mount Package)

SG-5

Model No.	RF1	RF2	RF3	RF4	COM	A1	B1	A2	B2	A3	B3	A4	B4
TWN2243	1	6	8	13	15	2	3	5	4	9	10	11	12

SG2 (Gull Wing Surface Mount Package)

SG-2

Model No.	COM	RF1	RF2	RF3	RF4	RF5	RF6	-V	CTL1	CTL2	CTL3
TWN8003	7	15	17	19	21	23	25	13	3	4	5

Outline Drawings All unmarked Pins are internally grounded.

FP2 (Flatpack)
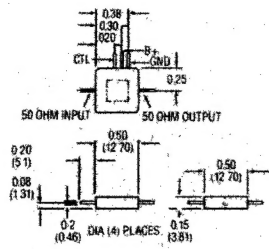
FP4 (Flatpack)
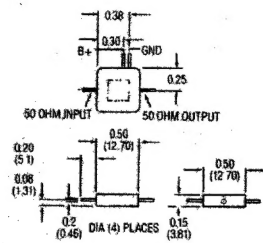
FP7 (Flatpack)
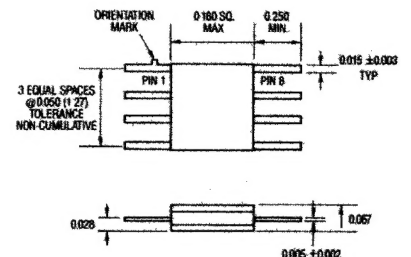
FP-7
PIN CONFIGURATION

Model No.	RF COM	RF1	RF2	A	B
SPST	N/A	8	5	2	3
SPDT	1	3	6	4	5

FP9 (Flatpack)
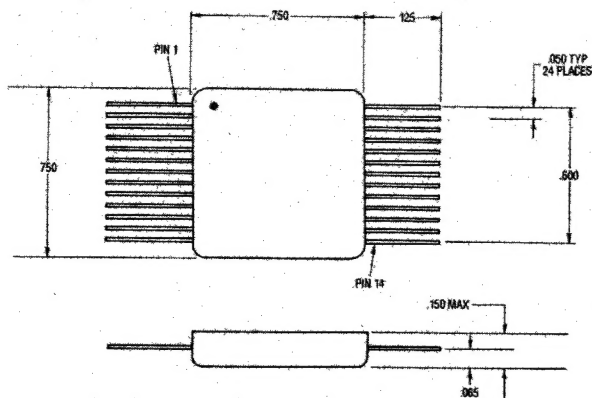
FP-9

Model No.	COM	RF1	RF2	RF3	RF4	RF5	RF6	RF7	-V	CTL 1	CTL 2	CTL 3
TWP6004	7	14	16	18	20	22	24	26	13	3	4	5

FP10 (Flatpack)
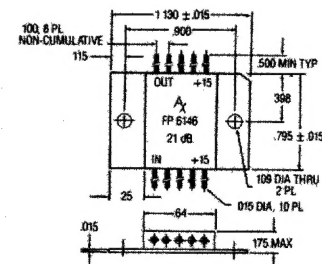
FP11 (Flatpack)
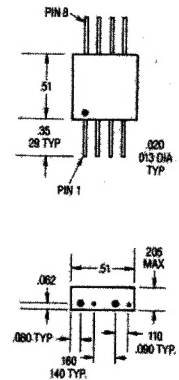
FP-11

	Out	Vtune	V+
VCOs	7	3	1

FP12 (Flatpack)
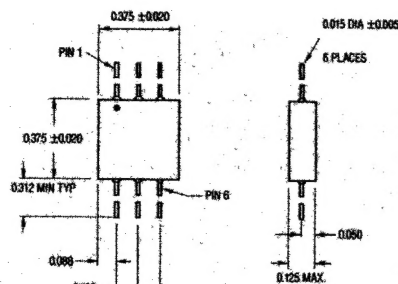
FP-12

Model No.	RF1	RF2	COM	A	B	+5	-5	CTL
TWP2214	2	4	N/A		3	N/A	N/A	N/A
TWP2202	4	6	2	1	3	N/A	N/A	N/A
TWP2225	4	6	2	N/A	N/A	1	3	4

FP13 (Flatpack)

RF 2 not connected on SPST
+ = +5 Vdc

FP14 (Flatpack)

RF 4 not connected on SP3T
+ = +5 Vdc

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